



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,537	06/10/2005	Christoph Raisch	DE920020035US1	4243
29683	7590	02/03/2009	EXAMINER	
HARRINGTON & SMITH, PC			NGUYEN, MINH TRANG T	
4 RESEARCH DRIVE, Suite 202			ART UNIT	PAPER NUMBER
SHELTON, CT 06484-6212			2419	
MAIL DATE		DELIVERY MODE		
02/03/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/538,537	Applicant(s) RAISCH, CHRISTOPH
	Examiner Minh-Trang Nguyen	Art Unit 2419

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 21-23,25,26,29-41,44 and 45 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 21-23,25,26,29-41 and 45 is/are rejected.
- 7) Claim(s) 44 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 10 June 2005 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08) _____
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 26, 2008 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claim 21 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claim 29 is objected to because of the following informalities: "comprising1" in line 6 should be changed to "comprising". Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims **21-23, 25, 26, 29-39 and 45** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al [2004/0233910 A1] in view of Rabe et al [7,194,538].

As to **claim 21**, Chen et al disclose a computer-implemented method comprising: managing a storage area network (**Fig. 2B, SAN 160**) with at least a SAN Management server (**Fig. 2B, SAN server 240**) and a SAN Management client (**Fig. 2B, storage manager**

280 implemented a client 210, paragraph [0036]), said SAN Management client running a trusted operating system (paragraph [0036], e.g., storage manager 280 is implemented as a JAWA-based console) and having a communication path to a Fibre Channel adapter (Fig. 2B, Fibre Channel adapter 160) said Fibre Channel adapter being disposed between the SAN and at least one computer system (Fig. 2B, a computer 210) running an untrusted operating system (e.g., the operating system of the computer 210 may be controlled or manipulated by a potential computer virus), said SAN Management server being connected to the at least one computer system and the SAN Management client, said SAN Management client being further connected to the at least one computer system (Fig. 2B, paragraphs [0037-0038]), and

separating requests issued by the SAN Management server into at least two groups (paragraphs [0036], [0039], e.g., requests relating to setting up, configuring the SAN, keeping track of the components attached to the storage server, and requests relating to two type of data storage protocols “Device Level Access Protocol” and “File Level Access Protocol”),

where a first group of requests is issued to the SAN Management client (paragraph [0036], e.g., requests relating to setting up, configuring the SAN, keeping track of the components attached to the storage server), and

a second group of requests (paragraph [0039], e.g., requests relating “File Level Access Protocol”) is issued to and processed by the at least one computer system without the need to send or receive requests to or from the Fibre Channel adapter and the SAN (paragraphs[0039], [0056]).

Chen et al do not expressly disclose that the first group of requests are processed by the Fibre Channel adapter and the SAN on behalf of the SAN Management client in place of the at least one computer system.

Rabe et al disclose the above recited limitations (**Fig. 5, col. 13, line 28 – col. 14, lines 37**).

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to incorporate the teachings of Rabe et al into Chen et al. The suggestion/motivation would have been to provide a secure storage from storage devices to hosts within the SAN as suggested by Rabe et al on col. 26, lines 57-59.

As to **claim 22**, Chen et al further disclose that routing all information contained in unsolicited messages generated in the SAN and Fibre Channel adapter to the SAN Management server by the SAN management client (**paragraphs [0036-0039]**).

As to **claim 23**, Chen et al disclose all claim limitations mentioned above with respect to claim 21. Chen et al do not expressly disclose that using Host Bus Adapter Application Program Interface binding requests to modify a firewall, and operating the communication path from the SAN Management client to the Fibre Channel adapter so that it cannot be modified or eavesdropped by an operating system image.

Rabe et al disclose the above recited limitations (**Figs. 9, 10, col. 27, lines 46 to col. 28, line 31**).

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to incorporate the teaching of Rabe et al into Chen et al. The suggestion/motivation would

have been to provide a secure storage from storage devices to hosts within the SAN as suggested by Rabe et al on column 26, lines 57-59.

As to **claim 25**, Chen et al further disclose that accessing all information relevant for billing individual operating system images generated in the Fibre Channel adapter and SAN only through the SAN Management client on the trusted path (**paragraphs [0036-0039]**).

As to **claim 26**, Chen et al further disclose that SAN Management server providing authorization data to the SAN Management client to execute requests from said first group, and said SAN Management server and SAN Management client providing authorization data to the OS images to execute requests from said second group, and operating the OS images so that they are only enabled to execute a limited command set in the SAN (**paragraphs [0036], [0043-0044]**).

As to **claim 29**, see similar rejection as to claim 21. Chen et al further disclose a computer program product (**Fig. 4, paragraphs [0040]**).

As to **claim 30**, see similar rejection as to claim 22.

As to **claim 31**, see similar rejection as to claim 23.

As to **claim 32**, see similar rejection as to claim 23.

As to **claim 33**, see similar rejection as to claim 25.

As to **claim 34**, see similar rejection as to claim 26.

As to **claim 35**, see similar rejection as to claim 26.

As to **claim 36**, see similar rejection as to claim 26.

As to **claim 37**, the combined teachings of Chen et al and Rabe et al further disclose that the SAN Management server is equipped with a SAN Management Client and a Remote Access

Server (RA Server), further comprising an operation of maintaining authorization data for accessing the RA Server in at least one of the SAN Management server and the SAN Management Client (**paragraph [0035]-[0039]**).

As to **claim 38**, the combined teachings of Chen et al and Rabe et al further disclose an operation of operating the SAN Management Client as a router for requests from the SAN Management server to the RA server (**paragraph [0035]-[0039]**).

As to **claim 39**, the combined teachings of Chen et al and Rabe et al further disclose that the RA Server comprises a telnet/sshd server (**paragraph [0035]-[0039]**).

As to **claim 45**, see similar rejection as to claim 26.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims **40-41** are rejected under 35 U.S.C. 102(b) as being anticipated by Iwatani [2001/0054093].

As to **claim 40**, Iwatani discloses a storage area network (SAN) Management server (see Fig. 3, e.g., SAN Integrated Management Mechanism 500, **paragraph [0052]**), comprising: a first interface (Fig. 3, e.g., the interface between SAN Integrated Management Mechanism 500 and Zoning Settings Mechanism 301) configured to couple to a SAN Management client (Fig. 3, e.g., Zoning Settings Mechanism 301) running a trusted operating

system (**paragraphs [0058], [0060]**, e.g., the **WWN and PID information held by the FCA and HBA is secured**), said SAN Management client being further coupled to a SAN via a SAN adapter (Fig. 3, e.g., the **Zoning Settings Mechanism 301 coupled to SAN via SAN adapter 411, 412, or 421**) and to at least one computer system (Fig. 3, e.g., **Host 110 or Host 120** running an untrusted operating system (e.g., the **operating system of Host 110 or Host 120 may be controlled or manipulated by a potential computer virus**); and

a second interface (Fig. 3, e.g., the **interface between SAN Integrated Management Mechanism 500 and Host 110 or Host 120**) configured to couple to at least one computer system (Fig. 3, e.g., **Host 110 or Host 120**), said at least one computer system being coupled to the SAN via the SAN adapter and via a unit for regulating access to the SAN (Fig. 3, **paragraph [0048], e.g., Host 110 or Host 120 SAN via SAN adapter 411, 412, or 421 and via Switch 300 for regulating access to the SAN**);

where said SAN Management server (Figs. 1, 3, e.g., **SAN Integrated Management Mechanism 1, 500**) comprises logic for distinguishing a first set of requests (Fig. 1, e.g., **requests between Zoning Settings Mechanism 3a and Integrated Management Mechanism 1**), from a second set of requests (Fig. 1, e.g., **requests between Host 2 and Integrated Management Mechanism 1**), where the first set of requests (Fig. 1, **paragraphs [0031-0032]**, e.g., **requests between Zoning Settings Mechanism 3a and Integrated Management Mechanism 1**) is issued to SAN management client (e.g., **Zoning Settings Mechanism**) and processed by the SAN adapter and the SAN on behalf of said SAN Management client in place of the at least one computer system (**paragraphs [0031-0032], [0036-0040]**), and where the second set of requests (Fig. 1, e.g., **requests between Host 2 and Integrated Management**

Mechanism 1) is issued to and processed at least in part by the at least one computer system (**Fig. 1, e.g., Host 2, Fig. 3, Host 110 or Host 120**) without the need to send or receive requests to or from the SAN adapter and the SAN (**paragraphs [0030], [0052-0053], [0068], [0070]**).

As to **claim 41**, Iwatani discloses that said first set of requests comprise at least one of a SAN request and a SAN adapter request (**paragraphs [0031-0032], [0036-0037], [0058], [0060]**), and said second set of requests comprise a request for configuration data of the at least one computer system (**paragraphs [0030], [0052-0053], [0068], [0070]**).

Allowable Subject Matter

8. Claim 44 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Trang Nguyen whose telephone number is (571)270-5248. The examiner can normally be reached on Monday to Friday 7:30AM to 5:00PM EST, first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag G. Shah can be reached on 571-272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. N./
Examiner, Art Unit 2419

/Chirag G Shah/
Supervisory Patent Examiner, Art Unit 2419